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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/600,831

06/23/2003

Toshiki Taguchi

Q76239

6941

23373

7590

07/19/2004

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SUITE 800  
WASHINGTON, DC 20037

EXAMINER

SHAH, MANISH S

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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|                              |                               |                                |  |
|------------------------------|-------------------------------|--------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/600,831 | Applicant(s)<br>TAGUCHI ET AL. |  |
|                              | Examiner<br>Manish S. Shah    | Art Unit<br>2853               |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>09/25/2003</u> .  | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1 & 6-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurabayashi et al. (# US 5618338).

Kurabayashi et al. discloses an inkjet recording method and an apparatus (figure: 4) using an ink set including a four color ink and one colorless ink (figure: 8; column: 6, line: 38-41), and the color ink and the colorless ink contains a betaine compound (column: 4, line: 65-66) in an amount of from 0.05 to 20% by weight (column: 5, line: 60-66). They also disclose that the ink including a dye dissolved in water or an organic solvent (column: 6, line: 52-65; column: 7, line: 4-25).

### ***Claim Rejections - 35 USC § 103***

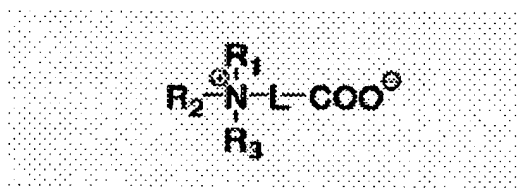
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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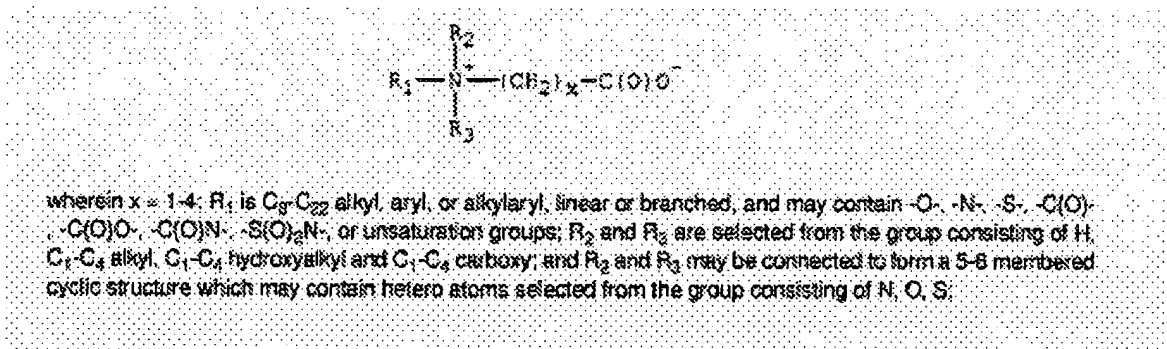
2. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurabayashi et al. (# US 5618338) in view of Ma et al. (# EP 0924272).

Kurabayashi et al. teaches all the limitation of the ink set except that the betaine compound is represented by the following formula.



wherein  $R_1$ ,  $R_2$  and  $R_3$  each represents an alkyl group, an aryl group or a heterocyclic group, at least two of  $R_1$ ,  $R_2$  and  $R_3$  may be linked with each other to form a ring structure;  $L$  represents a divalent linking group; and at least one of  $R_1$ ,  $R_2$ ,  $R_3$  and  $L$  is a group having from 8 to 40 carbon atoms and at least one of  $R_1$ ,  $R_2$ ,  $R_3$  is a linear alkyl group having from 8 to 40 carbon atoms.

Ma et al. teaches that to alleviating the mottle, and smear resistance printed image, ink set includes, surfactant, which is betaine compound, and which represents the following formula ([0007],[0025]).



It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the betaine compound of Kurabayashi et al. by the

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aforementioned teaching of Ma et al. in order to have a mottle free and smear resistance printed image.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Manish S. Shah  
Examiner  
Art Unit 2853

  
MSS

7/15/04

|                                   |                                       |  |             |
|-----------------------------------|---------------------------------------|--|-------------|
| <b>Notice of References Cited</b> | Application/Control No.<br>10/600,831 | Applicant(s)/Patent Under<br>Reexamination<br>TAGUCHI ET AL. |             |
|                                   | Examiner<br>Manish S. Shah            | Art Unit<br>2853   | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Name               | Classification |
|---|---|--|-----------------|--------------------|----------------|
|   | A | US-5,618,338                                     | 04-1997         | Kurabayashi et al. | 347/100        |
|   | B | US-  |                 |                    |                |
|   | C | US-  |                 |                    |                |
|   | D | US-  |                 |                    |                |
|   | E | US-  |                 |                    |                |
|   | F | US-  |                 |                    |                |
|   | G | US-  |                 |                    |                |
|   | H | US-  |                 |                    |                |
|   | I | US-  |                 |                    |                |
|   | J | US-  |                 |                    |                |
|   | K | US-  |                 |                    |                |
|   | L | US-  |                 |                    |                |
|   | M | US-  |                 |                    |                |

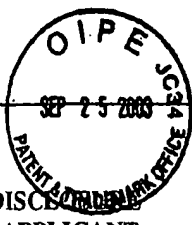
**FOREIGN PATENT DOCUMENTS**

| * |   | Document Number<br>Country Code-Number-Kind Code | Date<br>MM-YYYY | Country         | Name      | Classification |
|---|---|--|-----------------|-----------------|-----------|----------------|
| X | N | EP 924272 A1                                     | 06-1999         | European Patent | MA et al. | C09D 11/00     |
|   | O |  |                 |                 |           |                |
|   | P |  |                 |                 |           |                |
|   | Q |  |                 |                 |           |                |
|   | R |  |                 |                 |           |                |
|   | S |  |                 |                 |           |                |
|   | T |  |                 |                 |           |                |

**NON-PATENT DOCUMENTS**

| * |   | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|---|
|   | U |   |
|   | V |   |
|   | W |   |
|   | X |   |

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



MODIFIED PTO/SB/08 A &amp; B (06-03)

|  |   |   |                  |                          |               |
|--|---|---|------------------|--------------------------|---------------|
| <b>*Substitute for Form 1449 A &amp; B/PTO</b> |   | <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br>(use as many sheets as necessary) |                  | <b>Complete if Known</b> |               |
|  |   |   |                  | Application Number       | 10/600,831    |
|  |   | Confirmation Number   | 6941             | Filing Date              | June 23, 2003 |
|  |   | First Named Inventor  | Toshiki TAGUCHI  | Art Unit                 | 3617          |
|  |   | Examiner Name   | Not yet assigned | Attorney Docket Number   | Q76239        |
| Sheet  | 1 | of  | 1                |                          |               |

| U.S. PATENT DOCUMENTS |                       |                 |                                      |                                |   |
|-----------------------|-----------------------|-----------------|--------------------------------------|--------------------------------|---|
| Examiner Initials*    | Cite No. <sup>1</sup> | Document Number |                                      | Publication Date<br>MM-DD-YYYY | Name of Patentee or Applicant of Cited Document |
|                       |                       | Number          | Kind Code <sup>2</sup><br>(if known) |                                |   |
| MM                    |                       | US 5,973,026    | A                                    | 10/26/1999                     | Burns et al.                                    |
| MM                    |                       | US 6,039,793    | A                                    | 3/21/2000                      | Gundlach et al.                                 |
| MM                    |                       | US 5,540,765    | A                                    | 7/30/1996                      | Gundlach et al.                                 |
|                       |                       | US              |                                      |                                |   |
|                       |                       | US              |                                      |                                |   |
|                       |                       | US              |                                      |                                |   |
|                       |                       | US              |                                      |                                |   |
|                       |                       | US              |                                      |                                |   |
|                       |                       | US              |                                      |                                |   |

| FOREIGN PATENT DOCUMENTS |                       |                           |                     |                                      |                                |   |                                    |
|--------------------------|-----------------------|---------------------------|---------------------|--------------------------------------|--------------------------------|---|------------------------------------|
| Examiner Initials*       | Cite No. <sup>1</sup> | Foreign Patent Document   |                     |                                      | Publication Date<br>MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Translation <sup>4</sup>           |
|                          |                       | Country Code <sup>3</sup> | Number <sup>4</sup> | Kind Code <sup>5</sup><br>(if known) |                                |   |                                    |
| MM                       |                       | EP                        | 0 924 272           | A1                                   | 6/23/1999                      | —   | English                            |
| MM                       |                       | EP                        | 1 236 778           | A1                                   | 9/4/2002                       | —   | English                            |
| MM                       |                       | EP                        | 1 122 288           | A1                                   | 8/8/2001                       | —   | English                            |
| MM                       |                       | JP                        | 2000-135854         | A                                    | 5/16/2000                      | —   | Derwent Abstract                   |
| MM                       |                       | JP                        | 2003-12980          | A                                    | 1/15/2003                      | —   | English translations of the claims |
| MM                       |                       | JP                        | 2003-12981          | A                                    | 1/15/2003                      | —   | English translations of the claims |
|                          |                       |                           |                     |                                      |                                |   |                                    |
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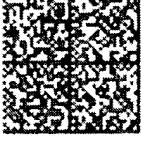
| NON PATENT LITERATURE DOCUMENTS |                       |  |                          |
|---------------------------------|-----------------------|--|--------------------------|
| Examiner Initials*              | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published. | Translation <sup>4</sup> |
| MM                              |                       | European Search Report dated July 29, 2003   |                          |
|                                 |                       |  |                          |
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|--------------------|--|-----------------|---------|
| Examiner Signature |  | Date Considered | 7/15/04 |
|--------------------|--|-----------------|---------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov), MPEP 901.04 or in the comment box of this document. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST. J). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to indicate here if English language Translation is attached.

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